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(54) Title: INHIBITORS OF HEPATITIS C VIRUS

(57) Abstract: The present invention relates to macrocyclic compounds, methods for making these compounds, pharmaceutical compositions and the therapeutic or prophylactic use of these compounds by administering said compounds to mammals to prevent or treat hepatitis C virus (HCV) infection.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/39926

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 38/12  
 US CL : 530/317

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 530/317; 435/5; 435/6. A61K 38/05, 38/06; A61P 31/14; C07K 5/08, 5/078

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 Please See Continuation Sheet

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 Internal Structure Search (CAS-STN Registry, HCAPLUS, CAOLD, USPATFULL, MARPAT, MARPATPREV); Internal Patent Search (EAST-USPAT, US-PGPUB, EPO, JPO, DERWENT); Internal Inventor Search (PALM).

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 00/059929 A1 (BOEHRINGER INGELHEIM (CANADA) LTD., 12 October 2000 (12.20.00), claim 1 (compound, 1st -C- bound to cyclopropyl), claim 54 (method of inhibiting HCV NS3 protease), claim 55 (pharmaceutical composition and carrier), claim 62 (medicament for treatment of a mammal with HCV)[also disclosed on specification pages 2, 20, and 22].	1-14
Y	US 6,323,180 B1 (LLINAS-BRUNET et al.) 27 November 2001 (27.11.01), claims (teaches use of sulfonyl compound in treatment of HCV NS3 protease inhibition, along with use of cyclopropyl).	1,2,3,9,11

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

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07 April 2003 (07.04.2003)

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Name and mailing address of the ISA/US  
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INTERNATIONAL SEARCH REPORT

PCT/US02/39926

**Continuation of B. FIELDS SEARCHED Item 2:**

Structure search: macrocyclic peptide of formula I and II, R2, R3, R4, and Q. R1 (i.e. cyclopropyl), attached to -SOO, was not searched as -SOO functional group [attached to core peptide (-cyclopropyl-CO-NH-)] was not found among structures searched.  
Term search: macrocyclic, peptide, cyclopropyl, carrier, pharmaceutical, composition, "HCV NS3 protease", HCV, NS3 protease, inhibitor, treatment.